

Peptides against autoimmune neurodegeneration

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Abstract

© 2017 Bentham Science Publishers. The mammalian immune system is a nearly perfect defensive system polished by a hundred million years of evolution. Unique flexibility and adaptivity have created a virtually impenetrable barrier to numerous exogenous pathogens that are assaulting us every moment. Unfortunately, triggers that remain mostly enigmatic will sometimes persuade the immune system to retarget against self-antigens. This civil war remains underway, showing no mercy and taking no captives, eventually leading to irreversible pathological changes in the human body. Research that has emerged during the last two decades has given us hope that we may have a chance to overcome autoimmune diseases using a variety of techniques to "reset" the immune system. In this report, we summarize recent advances in utilizing short polypeptides - mostly fragments of autoantigens - in the treatment of autoimmune neurodegeneration.

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Keywords

Autoantibodies, Autoreactive B cell elimination, Cross-reactivity, Immunotoxins, Liposomes, Multiple sclerosis, Specific allergen immunotherapy, Tolerance

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